

Title (en)
A SYSTEM FOR CALIBRATING PRESSURE SENSORS IN A UTILITY NETWORK

Title (de)
SYSTEM ZUR KALIBRIERUNG VON DRUCKSENSOREN IN EINEM VERSORGUNGSNETZWERK

Title (fr)
SYSTÈME D'ÉTALONNAGE DE CAPTEURS DE PRESSION DANS UN RÉSEAU UTILITAIRE

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Application
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Abstract (en)
[origin: EP3184984A1] A system 100 for calibrating pressure sensors 130, 131 in a utility network 101 is provided, the system 100 comprising a plurality of consumer sites 110, 111 in the utility network 101 each comprising a consumption meter 120, 121 arranged for measuring a flow rate of the utility at the consumer site 110, 111 and having first communication means 140, 141 for communicating data 150, 151 representing the flow rate at the consumer site 110, 111; a pressure sensor 130, 131 arranged to measure a fluid pressure of the utility at the consumer site 110, 111 and having second communication means 160, 161 for communicating data 170, 171 representing the fluid pressure at the consumer site 110, 111 and for receiving calibration data 260, 261, and having calibration means for calibration of the pressure sensor 130, 131 based on such calibration data 260, 261; first registration means 180 for registration of the elevation at each consumer site 110, 111 and communicating data 190, 191 representing such consumer site elevation; a reference pressure sensor 200 arranged at a reference site 210 in the utility network 101, the reference pressure sensor 200 being arranged to measure the fluid pressure at the reference site 210 and having third communication means 220 for communicating data 230 representing the fluid pressure at the reference site 210; second registration means 240 for registration of the elevation at the reference site 210 and communicating data 241 representing such reference site elevation; a data collector 250 arranged to receive all of said data 150, 151 representing the flow rate at the consumer site 110, 111 from each of consumptions meters 120, 121, all of said data 160, 161 representing the fluid pressure at the consumer site 110, 111 from each of the pressure sensors 130, 131, all of said data 190, 191 representing consumer site elevation, the data 230 representing the fluid pressure at the reference site 210, as well as the data 241 representing the reference site elevation, and for communicating calibration data 260, 261 to each of the pressure sensors 130, 131 for their calibration; and a computing unit 251 connected to the data collector 250, and being arranged to, for each consumer site 110, 111: calculate the elevation difference between the reference site 210 and the consumer site 110, 111; estimate the fluid pressure at the consumer site 110, 111 from the fluid pressure at the reference site 210 and the elevation difference for the consumer site 110, 111; and provide calibration data 260, 261 to the data collector 250 for calibration of the pressure sensor 130, 131 based on such estimated fluid pressure. The system provided is capable of precisely calibrating pressure sensors in a utility network.

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Cited by
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